

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COPY

Applicant: Robert H. Halstead, Jr.
Application No.: 09/966,564 Group: 2672
Filed: September 27, 2001 Examiner: Amini, Javid A.
Confirmation No.: 3785

For: SYSTEM AND METHOD FOR PROCESSING GRAPHICAL OBJECTS FOR
LAYOUT USING AN ELASTIC DIFFERENCE OPERATION

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202	
on _____ Date	_____ Signature
_____ Typed or printed name of person signing certificate	

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MAR 29 2004

Technology Center 2600

DECLARATION UNDER 37 C.F.R. §1.132 OF DAVID E. HOLLINGSWORTH

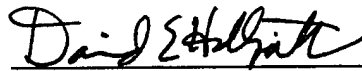
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22213-1450

Sir:

I, David E. Hollingsworth, of 13030 Tamayo Drive, Austin, Texas 78729 declare and
state that:

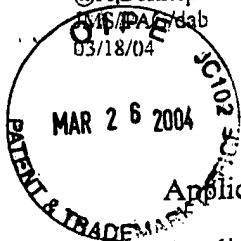
1. I am a co-inventor, along with Robert H. Halstead, Jr., of the subject matter described and
claimed in U.S. Patent 6,504,544, filed July 30, 1999, entitled "Processing Layout of Text
Graphical Objects," ("the Hollingsworth patent").
2. The dates of events referred to in this Declaration are based upon my personal
recollection or by referring to certain files or records that have been maintained during the
events described herein.

3. I am a founder of Curl Corporation and have been subject to an obligation to assign my inventions to Curl Corporation since 1998.
4. Robert H. Halstead, Jr. solely conceived and invented the fundamental elastic operations for graphical layout that are described in the Hollingsworth patent. In particular, these fundamental elastic operations include the "add," "max," "divide," "scale," "equal," and "equal at size" elastic operations.
5. Robert H. Halstead, Jr. provided the suggestion expressly recited in the Hollingsworth patent that other operators, such as "subtract," could also be envisioned." See the Hollingsworth patent, col. 6, lines 23-24.



David E. Hollingsworth

Date: Mar 19, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COPY

Applicant: Robert H. Halstead, Jr.
Application No.: 09/966,564 Group: 2672
Filed: September 27, 2001 Examiner: Amini, Javid A.
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For: SYSTEM AND METHOD FOR PROCESSING GRAPHICAL OBJECTS FOR
LAYOUT USING AN ELASTIC DIFFERENCE OPERATION

CERTIFICATE OF MAILING	
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on _____ Date	_____ Signature
_____ Typed or printed name of person signing certificate	

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MAR 29 2004
Technology Center 2600

DECLARATION UNDER 37 C.F.R. §1.132 OF ROBERT H. HALSTEAD, JR.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22213-1450

Sir:

I, Robert H. Halstead, Jr., of 24 Louise Road, Belmont, Massachusetts 02478 declare and
state that:

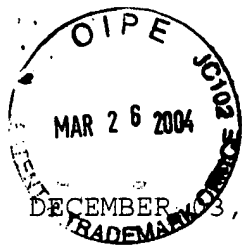
1. I am the sole inventor of the subject matter described and claimed in U.S. Patent
Application Serial No. 09/966,564, entitled "System and Method for Processing
Graphical Objects for Layout Using an Elastic Difference Operation."
2. The dates of events referred to in this Declaration are based upon my personal
recollection or by referring to certain files or records that have been maintained during the
events described herein.

3. I am a founder of Curl Corporation and have been subject to an obligation to assign my inventions to Curl Corporation since 1998.
4. I am a co-inventor, along with David E. Hollingsworth, of the subject matter described and claimed in U.S. Patent 6,504,544, filed July 30, 1999, entitled "Processing Layout of Text Graphical Objects," ("the Hollingsworth patent").
5. I solely conceived and invented the fundamental elastic operations for graphical layout that are described in the Hollingsworth patent. In particular, these fundamental elastic operations include the "add," "max," "divide," "scale," "equal," and "equal at size" elastic operations.
6. I provided the suggestion expressly recited in the Hollingsworth patent that other operators, such as "subtract," could also be envisioned." See the Hollingsworth patent, col. 6, lines 23-24. However, at the time of filing the Hollingsworth patent, I did not have a specific application that required an elastic subtraction operation and thus provided no further description of that operator in the Hollingsworth patent.
7. On or about August 5, 1999, I solely made the elastic subtraction operation for use in grid and table layout using elastics. This elastic subtraction operation is described in U.S. Provisional Application No. 60/236,289 filed September 28, 2000 and described and claimed in U.S. Patent Application Serial No. 09/966,564, filed September 27, 2001.

Robert H. Halstead, Jr.

Robert H. Halstead, Jr.

Date: 3/19/04



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

DECEMBER 13, 1999

PTAS

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
JAMES M. SMITH, ESQ.
TWO MILITIA DRIVE
LEXINGTON, MA 02421-4799



101151042A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/20/1999

REEL/FRAME: 010246/0123
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HOLLINGSWORTH, DAVID E.

DOC DATE: 08/26/1999

ASSIGNOR:

HALSTEAD, JR., ROBERT H.

DOC DATE: 08/26/1999

ASSIGNEE:

CURL CORPORATION
549 TECHNOLOGY SQUARE, 2ND FLOOR
CAMBRIDGE, MASSACHUSETTS 02139

SERIAL NUMBER: 09365057

PATENT NUMBER:

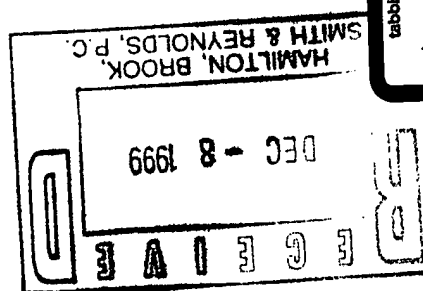
FILING DATE: 07/30/1999

ISSUE DATE:

ANTIONE ROYALL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

EXHIBIT

A



09-22-1999

Docket No.: CRL99-12

REC

SHEET

9-20-99



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101151042

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies)

David E. Hollingsworth
Robert H. Halstead, Jr.

OPR/FINANCE

2. Name and address of receiving party(ies)

Name: Curl Corporation

Internal Address: _____

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other _____Execution Date: 08/26/99Street Address: 549 Technology Square, 2nd FloorCity: Cambridge State: MA ZIP: 02139Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

09/365,057

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: James M. Smith, Esq.

Internal Address: _____

Hamilton, Brook, Smith & Reynolds, P.C.Street Address: Two Militia DriveCity: Lexington State: MA ZIP: 02421-47996. Total number of applications and patents involved: [1]7. Total Fee (37 C.F.R. 3.41)..... \$ 40.☒ Enclosed☒ Authorized to charge any deficiencies or credit any overpayment to deposit account☐ Authorized to be charged to deposit account

8. Deposit account number:

08-0380

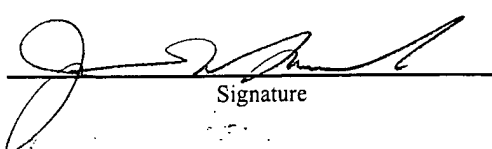
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*James M. Smith, Esq.

Name of Person Signing


Signature9/14/99
DateTotal number of pages including cover sheet, attachments, and document: [4]

09/21/1999 MTHAI1 00000179 09365057

01 FC:581

40.00 OP

JointASSIGNMENT

WHEREAS, we, **David E. Hollingsworth and Robert H. Halstead, Jr.**, have invented a certain improvement in **Processing Layout of Text Graphical Objects** described in an application for Letters Patent of the United States, the specification of which:

☐ is being executed on even date herewith and is about to be filed in the United States Patent Office;

☒ was filed on July 30, 1999 as Application No. 09/365,057;

☐ was patented under U.S. Patent No. _____ on _____.

WHEREAS, **Curl Corporation** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Delaware**, and having a usual place of business at **549 Technology Square, 2nd Floor, Cambridge, MA 02139** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:

David E Hollingsworth

David E. Hollingsworth

State/Commonwealth

of MASSACHUSETTS

County of MIDDLESEX

Then personally appeared before me the above-named **David E. Hollingsworth** and acknowledged that he executed the foregoing instrument as his free act and deed this

26TH day of AUGUST, 1999.

(SEAL)

Doug Robinow

Notary Public

DOUGLAS ROBINOW

(print name)

My Commission expires 9 / 2 / 05

Inventor's Signature: Robert H. Halstead, Jr.
Robert H. Halstead, Jr.

State/Commonwealth

of MASSACHUSETTS

County of MIDDLESEX

Then personally appeared before me the above-named **Robert H. Halstead, Jr.** and acknowledged that he executed the foregoing instrument as his free act and deed this 26th day of AUGUST, 1999.

(SEAL)

Doug Robinow Notary Public
DOUGLAS ROBINOW (print name)
My Commission expires 9 / 2 / 05



UNITED STATES
PATENT AND
TRADEMARK OFFICE



MAY 13, 2002

PTAS

HAMILTON, BROOK, SMITH & REYNOLDS PC.
JAMES M. SMITH, ESQ.
530 VIRGINIA RD.
PO BOX 9133
CONCORD, MA 01742-9133

Commissioner for Trademarks
Arlington, VA 22202-3513
www.uspto.gov



102023938A

UNITED STATES PATENT AND TRADEMARK OFFICE
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/28/2002

REEL/FRAME: 012681/0350
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HALSTEAD, JR., ROBERT H.

DOC DATE: 02/15/2002

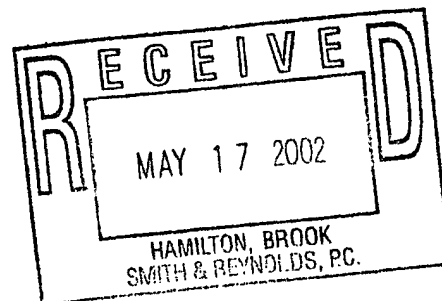
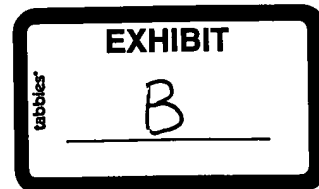
ASSIGNEE:

CURL CORPORATION
400 TECHNOLOGY SQUARE, 8TH FLOOR
CAMBRIDGE, MASSACHUSETTS 02139

SERIAL NUMBER: 09966564
PATENT NUMBER:

FILING DATE: 09/27/2001
ISSUE DATE:

ANTIONE ROYALL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



03-20-2002

Docket No.: 2682.2018-000

RE

R SHEET

102023938

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies)

Robert H. Halstead, Jr.

2 - 28 - 02

2. Name and address of receiving party(ies)

Name: Curl Corporation

Internal Address: _____

Street Address: 400 Technology Square, 8th Floor

City: Cambridge State: MA ZIP: 02139

Additional name(s) & address(es) attached? [] Yes [x] No

Additional name(s) of conveying party(ies) attached? [] Yes [x] No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other _____

Execution Date: 2/15/02

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

09/966,564

B. Patent No.(s)

Additional numbers attached? [] Yes [x] No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: James M. Smith, Esq.

Internal Address: _____

Hamilton, Brook, Smith & Reynolds, P.C.

Street Address: 530 Virginia Road, P.O. Box 9133

City: Concord State: MA ZIP: 01742-9133

6. Total number of applications and patents involved: [1]

7. Total Fee (37 C.F.R. 3.41)..... \$ 40.00

☒ Enclosed☒ Authorized to charge any deficiencies or credit any overpayment to deposit account☐ Authorized to be charged to deposit account

8. Deposit account number:

08-0380

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

C. Steven Kurlowicz

Name of Person Signing

Signature

Date

2/15/02

03/17/2002 DBYRNE 00000264 09966564

01 FEB 2002

Total number of pages including cover sheet, attachments, and document: [3]

Doc No. 2682.2018-000SoleASSIGNMENT

WHEREAS, I, **Robert H. Halstead, Jr.**, have invented a certain improvement in **SYSTEM AND METHOD FOR PROCESSING GRAPHICAL OBJECTS FOR LAYOUT USING AN ELASTIC DIFFERENCE OPERATION**, described in an application for Letters Patent of the United States, the specification of which:

☐ is being executed on even date herewith and is about to be filed in the United States Patent Office;

☒ was filed on **September 27, 2001** as Application No. **09/966,564**;

☐ was patented under U.S. Patent No. ☐ on ☐.

WHEREAS, **Curl Corporation** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Delaware** and having a usual place of business at **400 Technology Square, 8th Floor, Cambridge, Massachusetts 02139** desires to acquire an interest therein in accordance with agreements duly entered into with me;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, I have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by me had this assignment and sale not been made; I hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. I hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, I hereby further agree for myself and my executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

-2-

AND, I do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal the date set forth below.

Inventor's Signature:

Robert H. Halstead, Jr.
Robert H. Halstead, Jr.

State/Commonwealth

of MASSACHUSETTSCounty of MIDDLESEX

Then personally appeared before me the above-named **Robert H. Halstead, Jr.** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 15 day of February, 2002.

(SEAL)

Lillian I. Enamorado
LILLIAN I. ENAMORADO

Notary Public

(print name)

My Commission expires ____/____/____
LILLIAN I. ENAMORADO, Notary Public
My commission expires Mar. 19, 2004

C:\WINNT\Profiles\cfrerkin\My Documents\Patent Status\Assignments\262149_1.WPD